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Submission by

Evie Networks

to the

Senate Economics Legislation Committee

on

Treasury Laws Amendment

(Electric Car Discount) Bill 2022

About Evie Networks

Evie Networks was founded in 2017 by the St Baker Energy Innovation Fund with the aim of building Australia's largest Electric Vehicle fast and ultra fast charging network across all Australian States and Territories as part of a strategy that recognised the need for, and societal benefits of, the electrification of the Australian Transport Sector and the associated need to address concerns about "Range Anxiety" with EVs. Evie therefore has a strong focus on building quality charging stations, located on sites that are convenient for customers and underpinned by the Evie team's relentless pursuit of reliability and customer satisfaction. Its initial rollout was on national highways and is now being expanded into major metropolitan areas and regional centres. Evie currently has over 70 sites in operation and expects to have over 200 sites by July 2023.

Evie Networks is backed by the St Baker Energy Innovation Fund's commitment of $100 million, which is accompanied by significant grants from the Australian Renewable Energy Agency (ARENA) and the Federal Government's Future Fuels Fund. Evie Networks has also been successful in being selected to help rollout EV charging sites under a number of State Government and Local Government EV charging infrastructure programs. This makes Evie Networks the most well funded EV charging operator in Australia, providing confidence that it will continue to grow and support its network across all Australian States and Territories.

Introduction

Thank you for the opportunity to provide this submission to the Senate Legislation Economics Committee on the Treasury Laws Amendment (Electric Car Discount) Bill 2022.

The comments contained herein only address the provisions of the Bill dealing with exempting from Fringe Benefit Tax (FBT) cars that are "zero or low emission vehicles". The Bill defines "zero or low emission vehicles" as: Battery Electric Vehicles, Hydrogen Fuel Cell Electric Vehicles and Plug-In Hybrid Electric Vehicles.

Based on the materials set out below, it is submitted that exempting Plug-In Hybrid Electric Vehicles (Plug-In Hybrids) from FBT would not represent an efficient use of taxpayers' funds in terms of helping to achieve the Government's policy of reducing Carbon Emissions by 43% by 2030 and reaching the Government's Net Zero Emissions Target by 2050 as the emission reduction performance of the real world operation of these vehicles is very low in comparison with Battery Electric Vehicles.

As passenger motor vehicles have an average operating life of around 15 years, providing a FBT exemption to Plug-In Hybrids would lock in this lower level of Carbon Emission reductions versus Battery Electric Vehicles potentially through to 2037 and beyond.

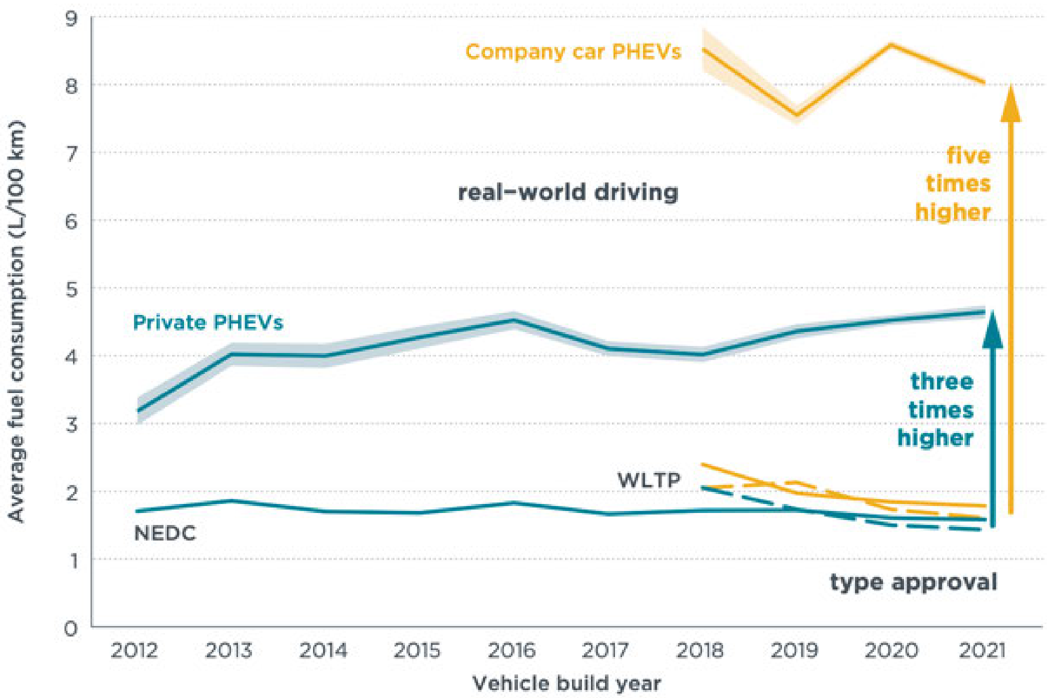
The Real-World Fuel Consumption of Plug-In Hybrids

Overseas studies have found considerable divergence between the official "rating" (or what are described at type-approval values) for Plug-In Hybrids (PHEVs) versus actual performance, with this being especially the case for company cars. The Committee is referred to the following documents:

- The International Council of Clean Transportation: Real-World Usage of Plug-In Hybrid Vehicles in Europe: A 2022 Update on Fuel Consumption, Electric Driving, and CO2 Emissions (available at: https://theicct.org/publication/real-world-phev-use-jun22).

- IOP Science, Lab to Road: Real-World Fuel Consumption and CO2 Emissions of Plug-In Hybrid Electric Vehicles (available at: https://iopscience.iop.org/article/10.1088/1748-9326/abef8c

The International Council of Clean Transportation materials show that the real-world fuel consumption of PHEVs in Europe is on average three to five times higher than WLTP type-approval values. The average real-world fuel consumption of PHEVs in Europe is 4.0–4.4 L/100 km for private vehicles and 7.6–8.4 L/100 km for company cars compared to an average of 1.6–1.7 L/100 km in WLTP type approval (Figure ES 1). These values correspond to tailpipe emissions of 90–105 g CO_2/km for private vehicles and 175–195 g CO_2/km for company cars compared to only 37–39 g CO_2/km in WLTP type approval. (See Page i)



The International Council of Clean Transportation report made a number of recommendations, including (Page v):

> **PHEVs should be excluded from zero- and low-emission vehicle (ZLEV) credits in the CO_2 emission standards.** Given PHEVs' much higher CO_2 emissions in average real-world operation compared to type-approval values, they should not be considered in the credits for zero- and low-emission vehicles targets of the European Union's CO_2 emission standards. Alternatively, only those vehicles that meet the low emission targets during real-world operation could be included.
>
> **Fiscal incentives for PHEVs should be abolished or limited to vehicles with demonstratively low fuel consumption or high electric driving share.** On an individual user level, fiscal incentives such as purchase subsidies and reduced taxation rates for PHEVs should only be issued if a user can demonstrate a certain fuel consumption. The realized electric driving share is a less suitable indicator but could be used as a proxy. If the electric driving share is used as a threshold, it should be about 80% for average PHEV models to achieve real-world fuel consumption close to type-approval values. Similar to what is observed in private PHEVs today, an electric driving share of 50% would, depending on the vehicle model, still result in an about two to three times higher fuel consumption than considered in WLTP values. On a vehicle model level, incentives for PHEVs should thus be limited to vehicles that allow users to realize low fuel consumption and high electric driving shares. Real-world data on fuel consumption and electric driving share may be obtained through OBFCM devices.

The second document (From Lab to Road: Real-World Fuel Consumption and CO2 Emissions of Plug-In Hybrid Electric Vehicles) concluded:

> PHEVs offer the potential to reduce CO2 emissions from road transport if mainly driven on electricity. Here, we show that PHEVs drive significantly less on electricity and show on average two to four times higher tailpipe CO2 emissions than expected from test cycles, in particular the NEDC. Depending on the PHEV model, user group and country, these emissions show a broad range of 50–300 g CO2 km−1. The reason for the large deviation are less frequent charging than assumed in test cycles, lower real-world all-electric ranges and higher than expected FC in combustion engine mode. The deviation is particularly large for company cars where existing financial incentives often make refuelling attractive and charging unattractive for PHEV users.

The International Council on Clean Transportation has also undertaken a life-cycle assessment of GHG emissions from a variety of passenger cars:

- Decarbonising Road Transport By 2050: Zero-Emission Pathways For Passenger Vehicles (available at: https://theicct.org/publication/decarbonizing-road-transport-by-2050-zero-emission-pathways-for-passenger-vehicles/)

It states (at Pages 6 & 9 respectively, plus graph from Page 4):

> **Plug-in hybrids**
>
> Battery EVs deliver large GHG reductions compared to gasoline and diesel cars. Plug-in hybrid EVs do not. Plug-in hybrids are cars with both electric motors (powered by a battery and electric charging) and internal combustion engines (fueled by gasoline). Plug-in hybrids have the ability to operate in a mostly, although usually not entirely, electric drive mode. However, in practice drivers tend not to operate plug-in hybrids on electricity nearly as much as they could feasibly do, but instead use the gasoline engine for around half the vehicle miles travelled. Plug-in hybrids are better for the climate than conventional gasoline cars, but given current driving behavior, they are not a very low-GHG solution.

And:

> Decarbonizing the transportation sector is imperative if we are to avoid the worst impacts of the climate crisis. It is also a deeply challenging task that will require rapid adaptation and change. Because of the long lifetime of vehicles, it is urgent to immediately begin the transition to those capable of delivering deep GHG reductions. To that end, this briefing identifies very low-GHG passenger vehicle and fuel pathways. To summarize the key points:
>
> **• Only battery and hydrogen fuel-cell EVs have the potential to be very low-GHG passenger vehicle pathways………….**

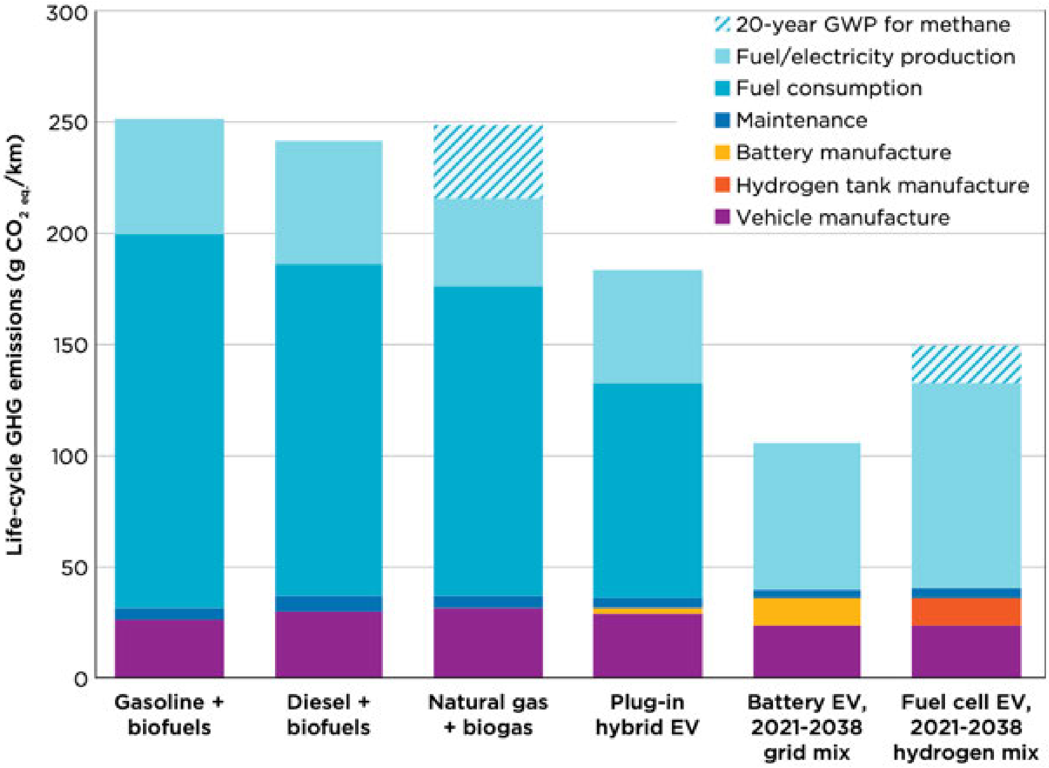


Figure 1. Life-cycle GHG emissions for global typical medium-size passenger cars registered in 2021.

Conclusion

The materials presented demonstrate the relatively poor Carbon Emission Reduction performance of Plug-In Hybrids in both absolute terms and relative to Battery Electric Vehicles in terms of their real-world performance versus their official "rating". This is because in practice drivers of Plug-In Hybrids tend not to operate their vehicles on electricity nearly as much as they could feasibly do so and, instead, tend to rely far more on running their vehicles on fossil fuels. This is especially so for company cars.

They are therefore not an efficient way of delivering substantial reductions in Carbon Emissions in the Transport Sector. As a result, extending a FBT Exemption to Plug-In Hybrids does not represent an efficient use of taxpayers' funds in terms of achieving the Government's 2030 and 2050 Carbon Emission Reduction Targets.

It is therefore submitted that the Committee should recommend that Plug-In Hybrids should not be eligible for a FBT Exemption, with the Bill being amended accordingly. It is noted that the EV Rebate Schemes for all the mainland States specifically exclude Plug-In Hybrids.

16 August, 2022